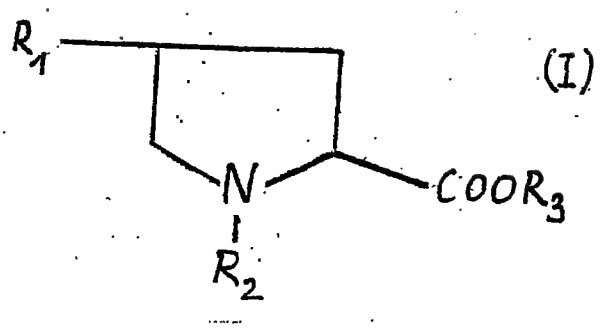
Claims:

1. A compound of general formula (I),



wherein
R_1 is a hydroxy, aryl or amino acid group,
R_2 is hydrogen, an alkyl (C_1-C_4), a substituted alkyl (C_1-C_4) group, a dialkyl (C_1-C_4), a cyclohexyl, a phenyl or diphenyl group,
R_3 is an alkyl (C_2-C_5) group,
and/or salts thereof,
with the proviso that, if R_1 is a hydroxy group, R_2 is not a methyl group.

2. The compound according to claim 1,
characterized in that
R_1 is a hydroxy, phenylamino or an amino acid group,
R_2 is hydrogen, a methyl, dimethyl, cyclohexyl or diphenylmethyl group, and
R_3 is an ethyl, isobutyl group and/or hydrogen.

3. The compound according to claim 1 or 2,
characterized in that
the salts are iodides, bromides and/or chlorides of the above compounds.

4. The compound according to any of claims 1 to 3,

characterized in that
the phenylamino group comprises modified amino groups, particularly phenylaminocarbonyloxy groups.

5. The compound according to any of the preceding claims, characterized in that
the compound is selected from the group comprising 4-hydroxyproline ethyl ester, 4-hydroxy-1,1-dimethylproline ethyl ester iodide, 4-hydroxyproline isobutyl ester, 4-hydroxy-1,1-dimethylproline isobutyl ester iodide, 4-hydroxy-1-cyclohexylproline isobutyl ester, 4-hydroxyl-1-diphenylmethylproline isobutyl ester hydrobromide, 4-hydroxy-1-methylproline, 4-hydroxy-1-methylproline ethyl ester, 4-hydroxy-1-methylproline isobutyl ester, 1-methyl-4-phenylaminocarbonyloxyproline and/or 1-methyl-4-phenylaminocarbonyloxyproline isobutyl ester.

6. A pharmaceutical agent comprising a compound according to any of the preceding claims, optionally together with conventional auxiliaries, preferably pharmaceutically acceptable carriers, adjuvants and/or vehicles.

7. The pharmaceutical agent according to the preceding claim, characterized in that
the carriers are selected from the group comprising fillers, diluents, binders, humectants, disintegrants, dissolution retarders, absorption enhancers, wetting agents, adsorbents and/or lubricants.

8. The pharmaceutical agent according to any of claims 6 or 7,
characterized in that
the carriers are liposomes, siosomes and/or niosomes.

9. The pharmaceutical agent according to any of claims 6 to 8,
characterized in that
the agent additionally comprises a chemotherapeutic agent.

10. The pharmaceutical agent according to the preceding claim, characterized in that
the chemotherapeutic agent is selected from the group comprising oxoplatin, cis-oxoplatin, taxol, gemcitabine, vinorelbine, paclitaxel, cyclosporin and/or a combination thereof.

11. The pharmaceutical agent according to any of claims 6 to 10,
characterized in that
it also comprises one or more additional agents from the group of antiviral, antifungicidal, antibacterial and/or immunostimulatory agents.

12. Use of the compound according to any of claims 1 to 5 and/or of the pharmaceutical agent according to any of claims 6 to 11 in the production of a drug for the diagnosis, prophylaxis, follow-up, therapy, and/or aftercare of diseases associated with cell growth, cell differentiation and/or cell division.

13. Use of 4-hydroxyproline ethyl ester, 4-hydroxy-1,1-dimethylproline ethyl ester iodide, 4-hydroxyproline isobutyl ester, 4-hydroxy-1,1-dimethylproline isobutyl ester iodide, 4-hydroxy-1-cyclohexylproline isobutyl ester, 4-hydroxy-1-diphenylmethylproline isobutyl ester hydrobromide, 4-hydroxy-1-methylproline, 4-hydroxy-1-methylproline ethyl ester, 4-hydroxy-1-methylproline isobutyl ester, 1-methyl-4-phenylaminocarbonyloxyproline, 1-methyl-4-

phenylaminocarbonyloxyproline isobutyl ester, (R)-(+)-α,α-diphenyl-2-pyrrolidinemethanol and/or (S)-(-)-α,α-diphenyl-2-pyrrolidinemethanol and/or derivatives, metabolites, enantiomers and/or isomers thereof in the diagnosis, prophylaxis, follow-up, therapy, and/or aftercare of diseases associated with cell growth, cell differentiation and/or cell division.

14. The use according to preceding claim,
characterized in that
the disease is a tumor.

15. The use according to preceding claim,
characterized in that
the tumor diseases are selected from the group of neoplastic tumors, inflammatory tumors, abscesses, effusions and/or edemas.

16. The use according to the preceding claim,
characterized in that
the tumor is a solid tumor or a leukemia.

17. The use according to the preceding claim,
characterized in that
the solid tumor is a tumor of the urogenital tract and/or gastrointestinal tract.

18. The use according to any of claims 12 to 17,
characterized in that
the tumor is a colon carcinoma, stomach carcinoma, pancreas carcinoma, small intestine carcinoma, ovarian carcinoma, cervical carcinoma, lung carcinoma, prostate carcinoma, mammary carcinoma, renal cell carcinoma, a brain tu-

mor, head-throat tumor, liver carcinoma, and/or a metastase of the above tumors.

19. The use according to any of claims 12 to 18, characterized in that the solid tumor is a mammary, bronchial, colorectal, and/or prostate carcinoma and/or a metastase of the above tumors.

20. The use according to any of claims 12 to 19, characterized in that the tumor of the urogenital tract is a bladder carcinoma and/or a metastase of such tumors.

21. The use according to any of claims 12 to 20, characterized in that said follow-up is monitoring the effectiveness of an anti-tumor treatment.

22. The use according to any of claims 12 to 21, characterized in that at least one compound according to any of claims 1 to 5 and/or a pharmaceutical agent according to any of claims 6 to 11 are employed in the prophylaxis, prevention, diagnosis, attenuation, therapy, follow-up and/or aftercare of metastasizing, invasion, infiltration, tumor growth and/or angiogenesis.

23. The use according to any of claims 12 to 22, characterized in that said follow-up is monitoring the effectiveness of an anti-tumor treatment.

24. The use according to any of claims 12 to 23, characterized in that

at least one compound according to any of claims 1 to 5 and/or a pharmaceutical agent according to any of claims 6 to 11 are employed in a combined therapy.

25. The use according to the preceding claim, characterized in that said combined therapy comprises a chemotherapy, a treatment with cytostatic agents and/or a radiotherapy.

26. The use according to the preceding claim, characterized in that the combined therapy comprises an adjuvant, biologically specified form of therapy.

27. The use according to the preceding claim, characterized in that said form of therapy is an immune therapy.

28. The use according to any of claims 12 to 27 to increase the sensitivity of tumor cells to cytostatic agents and/or radiation.

29. The use according to any of claims 12 to 28 for inhibiting the viability, the proliferation rate of cells in order to induce apoptosis and/or cell cycle arrest.

30. The use according to any of claims 12 to 29, characterized in that at least one compound according to any of claims 1 to 5 and/or a pharmaceutical agent according to any of claims 6 to 11 are prepared as gel, poudrage, powder, tablet, sustained-release tablet, premix, emulsion, brew-up formulation, drops, concentrate, granulate, syrup, pellet, bolus,

capsule, aerosol, spray and/or inhalant and/or inhalant and applied in this form.

31. The use according to the preceding claim, characterized in that at least one compound according to any of claims 1 to 5 and/or a pharmaceutical agent according to any of claims 6 to 11 are present in a preparation at a concentration of from 0.1 to 99.5, preferably from 0.5 to 95.0, and more preferably from 20.0 to 80.0 weight percent.

32. The use according to the preceding claim, characterized in that the preparation is employed orally, subcutaneously, intravenously, intramuscularly, intraperitoneally and/or topically.

33. The use according to any of claims 12 to 32, characterized in that at least one compound according to any of claims 1 to 5 and/or a pharmaceutical agent according to any of claims 6 to 11 are employed in overall amounts of more than 0.1 g per kg body weight per 24 hours.

34. The use according to any of claims 12 to 33, characterized in that at least one compound according to any of claims 1 to 5 and/or a pharmaceutical agent according to any of claims 6 to 11 are employed in overall amounts of 0.05 to 500 g per kg, preferably 5 to 100 g per kg body weight per 24 hours.

35. A method for the treatment of a tumor disease, characterized in that

an organism is contacted with an effective amount of a compound according to any of claims 1 to 5 and/or a pharmaceutical agent according to any of claims 6 to 11.

36. Use of the compound according to any of claims 1 to 5 and/or of the pharmaceutical agent according to any of claims 6 to 11 for inhibiting collagen IV and/or glutathione S transferase (GST).

37. A method for the preparation of a compound according to any of claims 1 to 5,
characterized in that
1-methyl-4-phenylaminocarbonyloxyproline ethyl ester is obtained by reacting 4-hydroxy-1-methylproline ethyl ester and phenyl isocyanate in acetonitrile.

38. A method for the preparation of a compound according to any of claims 1 to 5,
characterized in that
1-methyl-4-phenylaminocarbonyloxyproline isobutyl ester is obtained by reacting 4-hydroxy-1-methylproline isobutyl ester and phenyl isocyanate in acetonitrile.

39. A method for the preparation of a compound according to any of claims 1 to 5,
characterized in that
4-hydroxy-1-methylproline is obtained by reacting 4-hydroxyproline in formalin with Pd/C in a hydrogenation apparatus.

40. A method for the preparation of a compound according to any of claims 1 to 5,
characterized in that

4-hydroxy-1-methylproline ethyl ester is obtained by reacting 4-hydroxyproline ethyl ester and formalin in ethanol.

41. A method for the preparation of a compound according to any of claims 1 to 5,
characterized in that
4-hydroxy-1-methylproline isobutyl ester is obtained by reacting formalin, Pd/C and ethanol and 4-hydroxyproline isobutyl ester.

42. A method for the preparation of a compound according to any of claims 1 to 5,
characterized in that
4-hydroxy-1-methylproline isobutyl ester is obtained by reacting formalin and 4-hydroxyproline isobutyl ester in the presence of Pd/C in ethanol.

43. A method for the preparation of a compound according to any of claims 1 to 5,
characterized in that
cis-4-hydroxy-L-proline ethyl ester is obtained by contacting 4-hydroxyproline with HCl in ethanol.

44. A method for the preparation of a compound according to any of claims 1 to 5,
characterized in that
cis-4-hydroxy-L-proline isobutyl ester is obtained by reacting 4-hydroxyproline in isobutanol.

45. A method for the preparation of a compound according to any of claims 1 to 5,
characterized in that

4-hydroxy-1,1-dimethylproline ethyl ester iodide is obtained by reacting hydroxyproline ethyl ester in acetonitrile, methyl iodide and triethylamine.

46. A method for the preparation of a compound according to any of claims 1 to 5,
characterized in that
4-hydroxy-1,1-dimethylproline isobutyl ester iodide is obtained by reacting 4-hydroxyproline isobutyl ester and methyl iodide in triethylamine and acetonitrile.

47. A method for the preparation of a compound according to any of claims 1 to 5,
characterized in that
4-hydroxy-1-alkylproline ester bromide is obtained by suspending 4-hydroxyproline ester in acetonitrile and contacting with the corresponding alkyl bromide in the presence of ether.

48. A method for the preparation of a compound according to any of claims 1 to 5,
characterized in that
4-hydroxy-1-cyclohexylproline isobutyl ester is obtained by dissolving the corresponding hydrobromide in chloroform and contacting with gaseous ammonia.

49. A method for the preparation of a compound according to any of claims 1 to 5,
characterized in that
4-hydroxy-1-diphenylmethylproline isobutyl ester hydrobromide is obtained by contacting 4-hydroxyproline isobutyl ester, methyl iodide, triethylamine in acetonitrile.

50. A kit comprising at least one compound according to any of claims 1 to 5 and/or a pharmaceutical agent according to any of claims 6 to 11, optionally together with information for combining the contents of the kit.

51. Use of the kit according to the preceding claim in the prophylaxis or therapy of tumor diseases.

52. Hybrid molecules and/or prodrug molecules comprising a compound according to any of claims 1 to 5.

53. Use of the hybrid molecules, prodrug molecules according to claim 52 and/or derivatives, metabolites, enantiomers and/or isomers of the compounds according to any of claims 1 to 5 in the prophylaxis or therapy of tumor diseases.